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| 10/032,328 | 12/31/2001 | Ho-Woong Kang | P56619 | 4575 |
| 7590 | 05/08/2007 | | EXAMINER | |
| Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005 | | | LESPERANCE, JEAN E | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/032,328 | KANG, HO-WOONG | |
| | Examiner | Art Unit | |
| | Jean E. Lesperance | 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 26 February 2007.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-5 and 8-26 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-5,8-18,20,21 and 26 is/are rejected.
 7) Claim(s) 19 and 22-25 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 31 December 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed February 26, 2007 is entered and claims 1-5 and 8-26 are pending.

Response to Arguments

2. Applicant's arguments filed February 26, 2007 have been fully considered but they are not persuasive. The applicant representative argued that the prior art, Nikijima et al., does not teach or fail to disclose a data interface coupled to said signal processor and connected between said computer and said display system. Examiner disagrees because the prior art, Nikijima et al., teaches Fig.1, wherein the mouse and the keyboard (104 and 105) are connected to the display device (103) through a USB (not shown) and the display device inherently includes a data interface and a signal processor connected to the USB and the data interface is used as an interface between the display device and the computer (101 or 102) to provide communication between the display device and the computer. The applicant representative argued that the prior art does not teach an input terminal coupled to said controller disposed to receive an input signal. Examiner disagrees with the applicant because the prior art, Nikijima et al., teaches Fig.1, wherein the mouse and the keyboard (104 and 105) are connected to the display device (103) through a USB (not shown), which is coupled to the processor or controller to receive an input signal when the user enters data from the keyboard or mouse. Applicant's representative argued that the prior art, Nakajima, does not teach or

fail to disclose at least the features of receiving a video signal and transmitting an output signal via an input and output (I/O) connector disposed within said display device; converting said input signal into a converted signal to be identified by a computer when said first mode is selected; and transmitting said converted signal via said input and output (I/O) connector to said computer for analysis. Examiner disagrees with the applicant because the prior art teaches Fig.1, wherein the mouse and the keyboard (104 and 105) are connected to the display device (103) through a USB (not shown) wherein the display device receive the video signal and transmit it as an output signal (the user uses the mouse or keyboard to enter data into the computer which is converted into computer language and the display receives a video signal and transmits the display output which was entered through an input device by a user). In the case of the prior art, the computer has to find out which input devices, the keyboard or the mouse that has a higher authority enters the data and wherein the keyboard with its priority is considered to be first mode when accessing the computer and the mouse is considered to be the second mode when accessing the computer. The applicant argued that the prior art does not teach the claimed language of claim 17. Examiner disagrees because Boldt, one of the prior art, teaches said circuit means further includes shut down circuit means responsive to said input signal for producing a shut down signal when said input signal is at or below a predetermined value corresponding to a second predetermined percentage ratio of said movable member speed to said desired speed, and means for stopping said drive means of said movable member in response to said shut down signal (13, lines 6-14). Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 and 20-21 are rejected under 35 U.S.C. 102(e) as being unpatentable over US Patent Application #20010055029 by Nakajima et al..

Regarding claim 1, Nakajima et al. teach a display system receiving a video signal from a computer and displaying a picture on a screen corresponding to said video signal (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer. (paragraph 0004), comprising:

an input terminal (the mouse (105) and the keyboard (104) are connected to the input terminal of the display device (103) from the host computer (102)) and ;

a signal processor converting an input signal applied to said input terminal into an output signal to be recognized by said computer (character signal processing Fig. 7 (705) where the character entered from the computer using the keyboard has to be converted into computer language like 1's and 0's for the computer to understand ;

a data interface coupled to said signal processor and connected between said computer and said display system (signal lines Fig.1 (106,107, and 108)), transfer data from the computer (101) to the display device (103);

and a controller transmitting said output signal to said computer via said signal processing part and said data interface (control unit Fig.7 (707)).

Regarding claim 2, Nakajima et al. teach a memory Fig.7 (706); and said controller (control unit Fig.7 (707)) regulates said signal processor to convert said input signal into a control signal controlling said computer (character signal processing Fig. 7 (705) where the character entered from the computer using the keyboard has to be converted into computer language like 1's and 0's for the computer to understand), stores said control signal in said memory Fig.7 (706), and transmits said control signal from said memory to said computer via said data interface (signal lines Fig.1 (106,107, and 108)), transfer data from the computer (101) to the display device (103).

Regarding claim 3, Nakajima et al. teach an on-screen display generator (display unit (201) providing a variable video display for setting up a displaying condition, wherein said controller (control unit Fig.7 (707)) controls said on-screen display generator part to generate said video display in response to said input signal (the screen will change depending on the input signal send by the keyboard (104) or the mouse (105)).

Regarding claim 4, Nakajima et al. teach an input mode selector providing one of a computer input mode and a display system input mode for respectively recognizing

said input signal as an output signal to be applied to said computer and as a control signal for controlling said display system (The video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent to the display unit 201 and is displayed and outputted as video data (paragraph 0039); and said controller transmits said input signal to said computer via said signal processor and said data interface in the computer input mode, and said controller controls said display system in response to said input signal in the display system input mode (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)).

Regarding claim 5, Nakajima et al. teach said input terminal coupled to at least one of a mouse and a keyboard (the mouse (105) and the keyboard (104) are connected to the input terminal of the display device (103) from the host computer (102)).

Regarding claim 8, Nakajima et al. teach said input device further comprises at least one of a mouse and a keyboard (mouse 105 and keyboard 104).

Regarding claim 9, Nakajima et al. teach a display device (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer. (paragraph 0004), comprising:
a controller (controller unit Fig.7 (707);

an input terminal coupled to said controller disposed to receive an input signal (mouse 105 and keyboard 104 connected to the input terminal of the display unit (201) displayed a video signal 111 sent by the display device 103 from the host computer 102);

an input and output terminal coupled to said controller disposed to receive a video signal and transmit an output signal (the signal lines (106, 107, and 108) connected between the computer 101 and the display unit 103);

an input mode selector coupled to said controller selectively providing a computer input mode and a display device input mode (The video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent to the display unit 201 and is displayed and outputted as video data (paragraph 0039);

said controller transmitting said output signal in response to reception of said input signal during said computer input mode (input data from the key input device 104 is transmitted to the host computer 102 through a signal line 109 (paragraph 0034)); and

said controller controlling said video signal in response to reception of said input signal during said display device input mode (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)).

Regarding claim 10, Nakajima et al. teach said controller converting said input signal into said output signal in accordance with said computer input mode (an input interface unit 1001 and an input interface unit 1002 converts the signal into a digital signal of an ordinary voltage in which 3.3V or 5V is set to the high level. A change-over switch 1003 switches an A input and a B input and outputs in accordance with a state of a switch input S (paragraph 0105)).

Regarding claim 11, Nakajima et al. teach a video display device (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer (paragraph 0004)); and a computer Fig.1 (101) coupled to said input (mouse (105) and keyboard (104)) and output terminal (display unit (201), wherein said computer transmits said video signal to said video display device and receives said output signal from said video display device (input data from the key input device 104 is transmitted to the host computer 102 through a signal line 109 (paragraph 0034)).

Regarding claim 12, Nakajima et al. teach an input device (mouse (105) and keyboard (104)) disposed outside said display device (103), coupled to said input terminal (signal lines (106, 107, and 108), and providing said input signal to said display device (103) Fig.1.

Regarding claim 13, Nakajima et al. teach said input device comprises one of a mouse and a keyboard (Fig.1 (104 and 105)).

Regarding claim 14, Nakajima et al. teach said input mode selector disposed outside said display device and coupled to said input terminal (the microcomputer 401

discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)).

Regarding claim 15, Nakajima et al. teach said input device comprises one of a mouse (105) and a keyboard (104) Fig.1.

Regarding claim 16, Nakajima et al. teach said controller responding to reception of said input signal by generating a shut down signal for consumption of power by an external apparatus coupled to said input and output terminal (the host computer (101) inherently has a switch to turn on/off the power going the computer to conserve the power consumption and sometimes the controller can turn off the computer if it figures that there is no activity for a period of time).

Regarding claim 20, Nakajima et al. teach controlling a display device (a control of a display in such a kind of display device is realized by using a video signal and vertical and horizontal sync signals from a host computer (paragraph 0004)), with the steps comprised of:

receiving an input signal from a mouse or a keyboard at an input terminal (the input data from the mouse (105) and the keyboard (104) are transmitted to the host computer (101 or 102));

receiving a video signal (the display unit (201) receives a video signal from the host computer (101) and transmitting an output signal via an input and output (I/O) connector disposed within said display device (display unit (201) is displayed and outputted as video data;

alternatively selecting one of a first mode and a second mode (the video signal 108 from the host computer 101 and the video signal 111 from the host computer 102 are inputted to a video switching circuit 202 of the display device 103. Either one of them is selected and sent to the display unit 201 and is displayed and outputted as video data (paragraph 0039);

converting said input signal into a converted signal to be identified by a computer when said first mode is selected (the computer (101 or 102) inherently includes a converter (not shown) to convert the inputted data from the keyboard and the mouse into computer language that can be identified by the computer and depending on which input device enters the data, selects or switches to its priority.

transmitting said converted signal via said input and output I/O connector to said converted analysis (the microcomputer 401 discriminates that they are the interruption inputs, shifts a control mode to a switching control, and outputs a switching signal 206, thereby switching a switch of the video switching circuit 202 shown in FIG. 2 to the host computer 101 side (paragraph 0046)); and

controlling a display of said display device in response to said input signal when said second mode is selected (a control mode is switched to the display control of the other computer of a priority lower than that of the relevant computer by a switching control input of the computer or the like. In this case, the output of the video signal is stopped by the switching operation of the switch and the control also advances to step

S301 (paragraph 0061)).

Regarding claim 21, Nakajima et al. teach converting said input signal into an

output signal functionally controlling said computer coupled to said input and output I/O connector when said first mode is selected (an input interface unit 1001 and an input interface unit 1002 converts the signal into a digital signal of an ordinary voltage in which 3.3V or 5V is set to the high level. A change-over switch 1003 switches an A input and a B input and outputs in accordance with a state of a switch input S (paragraph 0105)).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application #20010055029 by Nakajima et al. in view of US patent # 4,251,759 (“Boldt”).

Regarding claim 17, Nakajima et al. fail to teach said input signal is a shut down signal for shutting down to reduce consumption of power by an external apparatus coupled to said input and output terminal.

However, Boldt teaches said circuit means further includes shut down circuit means responsive to said input signal for producing a shut down signal when said input signal is at or below a predetermined value corresponding to a second predetermined percentage ratio of said movable member speed to said desired speed, and means for

stopping said drive means of said movable member in response to said shut down signal (13, lines 6-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the shut down circuit as taught by Boldt in the display control disclosed by Nakajima et al. because this would prevent a malfunction of the display control system.

5. Claims 18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application #20010055029 by Nakajima et al. in view of US patent # 6,121,962 ("Hwang").

Regarding claim 18, Nakajima et al. fail to teach said controller responding to reception of said input signal representing a password signal by activating an external apparatus coupled to said input and output terminal.

However, Hwang teaches the input/output controller 7 is, in turn, connected to the system bus 1 for converting the mode of the computer system into a graphic off mode by outputting a graphic cut-off signal if the graphic off signal is input from the timer 6, checking a password if there is an input signal from a keyboard 71, a mouse 72 or an infrared port 74, and converting the mode of the computer system into a mode in which the user can see a screen of display unit 33; of the display or monitor 3 by stopping the output of the graphic cut-off signal if the password is correct. The second resistor R2 has one terminal connected to a node between the first resistor R1 in the

display 3 and the graphic controller 32, and the other terminal connected as the input/output controller 7 (column 6, lines 19-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the password as taught by Hwang in the display control disclosed by Nakajima et al. because this would provide a computer system for controlling a screen display of a monitor in a power management mode (column 2, lines 66 and 67).

Regarding claim 26, Hwang teaches when a predetermined time has passed and there is no input of a wake-up signal, the mode of the computer system is converted into a suspend mode from a standby mode at step 217. The chip set 4 senses the state of the power switch if the mode of the computer system is converted into the suspend mode. The process routine jumps to the step for performing the POST procedure if the power switch is turned ON, whereby the computer system is booted again. If the power switch is not turned ON, the power OFF state is maintained at step 219 (column 5, lines 46-55). Same motivation as claim 18.

Allowable Subject Matter

6. Claims 19 and 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Dependent claim 19 identifies a uniquely distinct feature "said controller generating an activation control signal to said input and output terminal when said input

signal represents an activation signal to initiate an increase in consumption of energy by an external apparatus coupled to said input and output terminal".

Dependent claim 22 identifies a uniquely distinct feature "making a determination of whether said input signal is a shut-down signal; and applying a control signal to said input and output (I/O) connector to regulate energy consumption by an appliance coupled to said input and output (I/O) connector in dependence upon said determination".

Dependent claim 23 identifies a uniquely distinct feature "making a determination of whether said input signal is an activation signal for activating an external apparatus coupled to said input and output terminal; and applying a control signal to said input and output terminal to regulate energy consumption by an appliance coupled to said input and output (I/O) connector in dependence upon said determination".

Dependent claim 24 identifies a uniquely distinct feature "making a determination whether said input signal is identical to a reference; and generating to said input and output terminal an activation control signal for activating an external apparatus coupled to said input and output (I/O) connector in accordance with said determination".

Dependent claim 25 identifies a uniquely distinct feature "making a determination whether said input signal is not identical to a reference; and preventing said input signal from being transmitted to said input and output (I/O) connector in accordance with said

determination".

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (571) 272-7692. The examiner can normally be reached on from Monday to Friday between 10:00AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C. 20231

or faxed to:

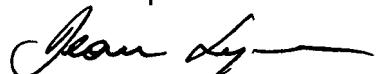
Art Unit: 2629

(571) 273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park 11, 2121 Crystal drive,
Arlington, VA, Sixth Floor (Receptionist).

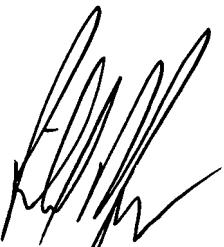
Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.

Jean Lesperance



Date 5/2/2007

Art Unit 2629



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600